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### REMARKS

Claims 1-10 are pending in this application. By this Amendment, Applicants AMEND claim 1.

The Examiner has indicated that the outstanding Office Action is a Final Office Action (paragraph no. 9 of the Office Action). The Examiner is reminded that "[b]efore [a] final rejection is in order[,] a **clear issue** should be developed between the examiner and applicant." MPEP § 706.07 (emphasis added).

First, in the previous Office Action, the Examiner attempted to reject claims 1-4 and 7-10 under 35 U.S.C. §102(b) as being anticipated by Takakura et al. The Examiner failed to **clearly** reject claims 1-4 and 7-10 over Takakura in the previous Office Action because the Examiner referenced Nitori, **NOT** Takakura et al., in the body of rejection. The Examiner corrected this error by clearly rejecting claims 1-4 and 7-10 over Takakura et al. and clearly referencing Takakura et al. in the body of rejection in the outstanding Office Action dated December 13, 2002. However, as is clear from the above, there has been only one actual prior art rejection of the claims in view of Takakura et al., and that single rejection was included in the Supplemental Office Action dated December 13, 2002.

Second, the Examiner has rejected claims 1-4 and 6-10 under 35 U.S.C. §102(e) as being anticipated by Ikeda et al. in the outstanding Office Action and the previous Office Action, dated June 24, 2002. However, the Examiner has failed to quote 35 U.S.C. §102(e) in the outstanding Office Action or the previous Office Action, dated June 24, 2002. It is the Applicants' understanding that the Examiner must recite the appropriate paragraph of 35 U.S.C. §102 in order to properly reject a claim under that paragraph of 35 U.S.C. §102. See Examiner's Notes, Form Paragraph 7.07, ("It [the recitation of statutory basis] is only **required** in first actions on the merits and final rejections" (emphasis added)).

Third, the Examiner has failed to address each of the arguments in Applicants' previous Amendment filed on October 21, 2002. With respect to the prior art rejection

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relying upon Takakura et al., Applicants argued that "Takakura et al. (JP 05-299206) clearly fails to teach or suggest ... 'a lower-end portion which extends lengthwise in the radial direction' as recited in claim 1 of the present application" in the first full paragraph on page 5 of the Office Action. The Examiner has completely failed to address Applicants' argument concerning this deficiency of Takakura et al.

With respect to the prior art rejection relying upon Honkomp et al., Applicants argued that "Honkomp et al. '089 does not teach or suggest in **figs. 2 and 3**, even when the elements are turned on their side, both the upper and lower terminals **17** extending downward from the thermistor element body **38**" and "Honkomp et al. '089 clearly fails to teach or suggest in **figs. 4-6**, even when the elements are turned on their side, that the vertical-leg portion **39** attached to the junction is inside the thermistor body **38**." The Examiner has completely failed to address Applicants' argument concerning these deficiencies of Honkomp et al.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the Finality of the outstanding Office Action.

Applicants greatly appreciate the Examiner's consideration of the IDS filed August 28, 2002. However, the Examiner has failed to initial reference AI, JP 08-031605, on the Form PTO-1449. Applicants respectfully request that the Examiner consider and indicate that reference AI was considered in conformance with MPEP § 609 in the next Office Action.

Claims 1-4 and 7-10 were rejected under 35 U.S.C. §102(b) as being anticipated by Katsuki et al. (U.S. 5,990,779). Claims 1-4 and 6-10 were rejected under 35 U.S.C. §102(e) as being anticipated by Ikeda et al. (U.S. 6,147,330). Claims 1-4, 7-8, and 10 were rejected under 35 U.S.C. §102(b) as being anticipated by Honkomp et al. (U.S. 5,117,089). Claims 1-4 and 7-10 are rejected under 35 U.S.C. §102(b) as being anticipated by Takakura et al. (JP 05-299206). Claim 5 was rejected under 35 U.S.C. §103(a) as being obvious over Takakura et al., Katsuki et al., or Ikeda et al. in view of Nagao et al. (U.S. 5,939,972). Applicant respectfully traverse these rejections.

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Claim 1 has been amended to recite:

A surface-mountable PTC thermistor element comprising:  
a thermistor element body including a top surface and a bottom surface;  
electrodes disposed on the top surface and the bottom surface of the thermistor element body;  
lower and upper terminals arranged such that each of the electrodes is connected with a respective one of the lower and upper terminals, and each of the lower and upper terminals is extended downward;  
wherein said lower terminal includes a junction portion contacting said thermistor element body, a **short vertical-leg portion bent vertically in a downward direction at an angle of about 90° to the surface of said thermistor element body, and a lower-end portion which extends substantially parallel to the junction portion and substantially perpendicular to the short vertical-leg portion.**"  
(emphasis added)

Applicants' claim 1 recites the feature of "a short vertical-leg portion bent vertically in a downward direction at an angle of about 90°" and "a lower-end portion which extends substantially parallel to the junction portion and substantially perpendicular to the short vertical-leg portion." With the improved features of claim 1, Applicants have been able to provide a surface-mountable PTC thermistor element including the vertical-leg portion of the lower terminal which is arranged to support all of the pressing force during surface mounting (see, for example, lines 12-20 on page 6 of the Specification).

The Examiner has alleged that both Katsuki et al. and Takakura et al. teach "a short vertical-leg portion bent vertically in a downward direction substantially perpendicular to the surface of said thermistor element body." Applicants have amended claim 1 to replace "substantially perpendicular" with --at an angle of about 90°--.

In anticipation of the Examiner maintaining the outstanding prior art rejection discussed above, Applicants note that the Examiner has identified the term "substantial" as a term of degree. The amended term "about" is also a term of degree. The

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Examiner is reminded that the terms "substantial" and "about" merely indicate that exactitude is not being claimed and that slight variations are also contemplated. Kolene Corp. v. Motor City Metal Treating, Inc., 163 USPQ 291; Performed Line Products Co. v. Fanner Mfg. Co., 124 USPQ 288.

The Examiner has correctly acknowledged that Takakura et al. shows a bending angle of slightly "less than about 45 degrees" in **Fig. 1** in paragraph no. 8 on page 4 of the Office Action. Further, the Examiner correctly acknowledged that Katsuki et al. shows a bending angle of slightly "more than 45 degrees" in **Figs. 7 and 8** in paragraph no. 8 on page 4 of the Office Action. The Examiner has alleged that the feature of "substantially perpendicular" as recited in Applicants' claim 1 includes the structures shown in Takakura et al. and Katsuki et al. At best, Takakura et al. and Katsuki et al. show the use of a bending angle of "about 45°."

The Examiner is entitled to give claims their broadest REASONABLE interpretation consistent with the specification. See MPEP § 2111. It is beyond reason to conclude that slight variations around 90° as recited in Applicants' claim 1 includes the "about 45°" arrangement shown in Takakura et al. and Katsuki et al.

When a term of degree is presented in a claim, first a determination is to be made as to whether the specification provides some standard for measuring that degree. If it does not, a determination is made as to whether one of ordinary skill in the art, in view of the prior art and the status of the art, would be nevertheless reasonably apprised of the scope of the invention. See In re Wiggins, 179 USPQ 421, 423 (CCPA 1973) and MPEP § 2173.05(b).

There is **absolutely** nothing in Applicants' Specification that would support the Examiner's allegation that "substantially perpendicular" or "at an angle of about 90°" would include "about 45°" as alleged by the Examiner.

Further, as noted above, the vertical-leg portion of the present claimed invention supports all of the pressing force during surface mounting of the PTC thermistor. One of ordinary skill in the art would easily recognize from Applicants' claims and

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Specification that that an angle of "about 45°" would not satisfy Applicants' recited angle of "about 90°" because an angle of "about 45°" would not allow the vertical-leg portion to support all of the pressing force during mounting.

As noted above, the Examiner has completely failed to address Applicants' arguments included in the Amendment filed October 21, 2002 with respect to Honkomp et al. Applicants argued that the thermistor shown in **Figs. 2 and 3** of Honkomp et al. does not have both the upper and lower terminals 17 extending downward from the thermistor element body 38 as recited in Applicants' claim 1. Applicants argued that the thermistor shown in **Figs 4-6** of Honkomp et al. does not show the "vertical-leg portion of the lower terminal is placed inside the thermistor element body in a radial direction from an outer edge of the thermistor element body" as recited in Applicants' claim 1.

The Examiner alleged in paragraph no. 8 of page 4 of the Office Action that "part 12 [of Homkomp] is that [radial] portion." Applicant is completely bewildered as to what the Examiner is referring because Applicants' claims do not recite a "radial portion." Part 12 is only shown in **Figs. 2 and 3** and cannot be considered to show the feature that both the upper and lower terminals 17 extend downward from the thermistor element body 38 as recited in Applicants' claim 1.

Ikeda et al. shows a surface-mountable PTC thermistor element in **fig. 7F** comprising a lower terminal with a vertical leg portion 172. However, Ikeda et al. clearly fails to teach or suggest "a lower-end portion which extends substantially parallel to the junction portion and substantially perpendicular to the short vertical-leg portion" as recited in Applicants' claim 1. Ikeda et al. merely teaches a portion "having vector components extending in the radial and vertical directions" (paragraph no. 3 on page 4 of the Office Action), **NOT** a lower-end portion which extends substantially parallel to the junction portion and substantially perpendicular to the short vertical-leg portion as recited in Applicants' claim 1.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejections of claim 1 under 35 U.S.C. §102(b) as being anticipated by Katsuki et al.,

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Honkomp et al., and Takakura et al. and under 35 U.S.C. §102(e) as being anticipated by Ikeda et al.

Nagao et al. was used by the Examiner to disclose the use of an electrode material for a PTC thermistor. However, Nagao et al. clearly fails to teach or suggest a lower terminal which includes "a junction portion contacting said thermistor element body, a short vertical-leg portion bent vertically in a downward direction at an angle of about 90° to the surface of said thermistor element body, and a lower-end portion which extends lengthwise in the radial direction" as recited in Applicants' claim 1.

Accordingly, Applicants respectfully submit that Katsuki et al., Ikeda et al., Honkomp et al., Takakura et al., and Nagao et al., applied alone or in combination, fail to teach or suggest the unique combination and arrangement of elements recited in claim 1 of the present application. Claims 2-10 depend upon claim 1, and are therefore allowable for at least the reasons that claim 1 is allowable.

In view of the foregoing amendments and remarks, Applicants respectfully submit that this application is in condition for allowance. Favorable consideration and prompt allowance are solicited.

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The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1353.

Respectfully submitted,

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